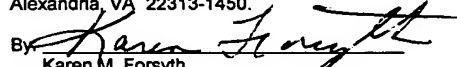


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I hereby certify that this paper and/or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. § 1.10 on the date indicated above and is addressed to the Commissioner For Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

By:   
Karen M. Forsyth

## PATENT

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTOR(S) : Lean et al.

TITLE : TRAVELING WAVE GRIDS AND ALGORITHMS  
FOR BIOMOLECULE SEPARATION,  
TRANSPORT AND FOCUSING

APPLICATION NO. : Unknown

FILED : Herewith

CONFIRMATION NO. : N/A

EXAMINER : N/A

ART UNIT : N/A

LAST OFFICE ACTION : N/A

ATTORNEY DOCKET NO.: D/A3236  
XERZ 2 00606

### INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

In accordance with 37 C.F.R. §§ 1.56, 1.97, 1.98 and MPEP § 609, applicant(s) submit(s) the following Disclosure Statement concerning art of which the applicant(s) is(are) aware. A copy of PTO-1449 is enclosed herewith.

Under § 1.98(a)(3), no concise explanation of relevance is required for information that is in the English language. Accordingly, the enclosed patents require no further explanation (or no translation is available).

Consideration of the appropriate paragraph(s) indicated below is respectfully requested:

- ☒ **WITHIN THREE MONTHS OF FILING:** Under § 1.97(b)(1), this information disclosure statement is being filed within three months of the filing date of the application. Although it is believed no fee is necessary, any deficiency in fees should be charged to Deposit Account No. 24-0037.
- ☐ **BEFORE FIRST OFFICE ACTION:** Under § 1.97(b)(3), this information disclosure statement is being filed before the mailing date of a first Office Action on the merits. Although it is believed no fee is necessary, any deficiency in fees should be charged to Deposit Account No. 24-0037.
- ☐ **BEFORE FINAL ACTION/WITH FEE:** Under § 1.97(c)(2), this information shall be considered if filed before the mailing date of a final action if accompanied by a fee in the amount of \$ as required by §1.17(p). The required fees should be charged to Deposit Account No. 24-0037.
- ☐ **INTERNATIONAL SEARCH REPORT:** Under § 1.97(e)(1), the undersigned certifies that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement. Although it is believed no fee is necessary, any deficiency in fees should be charged to Deposit Account No. 24-0037.

Respectfully submitted,

FAY, SHARPE, FAGAN,  
MINNICH & MCKEE, LLP

December 3, 2003  
Date

  
Mark E. Bandy  
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Seventh Floor  
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(216) 861-5582

Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT(S)</b>	<b>Complete if Known</b>	
	Application Number	Unknown
	Filing Date	Herewith
	First Named Inventor	Lean et al.
	Art Unit	Unknown
	Examiner Name	Unknown
Sheet 3 of 3	Attorney Docket No.	D/A3236 (XERZ 2 00606)

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No.	Document No. Number-Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	CA	US-			
	CB	US-			
	CC	US-			
	CD	US-			
	CE	US-			
	CF	US-			

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No.	Foreign Patent Document Country Code-Number Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
	CG					<input type="checkbox"/>
	CH					<input type="checkbox"/>
	CI					<input type="checkbox"/>
	CJ					<input type="checkbox"/>

**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T
	CK	DUNPHY et al., <i>Rapid Separation and Manipulation of DNA by a Ratcheting Electrophoresis Microchip (REM)</i> , November 17-22, 2002, pp. 419-423, ASME, USA	<input type="checkbox"/>
	CL	Proteome Systems, Products, Website, <i>ElectrophoretIQ</i> <sup>3</sup> , 2002 at <a href="http://www.proteomesystems.com/product/product.asp?ProductID=43">http://www.proteomesystems.com/product/product.asp?ProductID=43</a> and <a href="http://www.proteomesystems.com/product/profile.asp?DocumentID=662">http://www.proteomesystems.com/product/profile.asp?DocumentID=662</a>	<input type="checkbox"/>
	CM	ISC Buyers' Guide, Website, <i>Electrophoresis, 2D Gel</i> , 2002, at <a href="http://www.iscpubs.com/bg/us/prod/prod1991.html">http://www.iscpubs.com/bg/us/prod/prod1991.html</a>	<input type="checkbox"/>
	CN	EMBL's Proteomics Visitor Facility, Website, <i>2D Gel Equipment, Protean 2D Cells from Bio-Rad</i> , 2001, at <a href="http://mann.embl-heidelberg.de/Visitor_Facility/PageLinks/Instrumentation/GelchamberMain.html">http://mann.embl-heidelberg.de/Visitor_Facility/PageLinks/Instrumentation/GelchamberMain.html</a> , and <i>Protean IEF Cell from Bio-Rad</i> , at <a href="http://www.mann.embl-heidelberg.de/Visitor_Facility/PageLinks/Instrumentation/ECellMain.html">http://www.mann.embl-heidelberg.de/Visitor_Facility/PageLinks/Instrumentation/ECellMain.html</a>	<input type="checkbox"/>
	CO	JAMES R. JEFFERIES,, <i>2D Gel Electrophoresis for Proteomics Tutorial</i> , pp. 1-24 at <a href="http://www.aber.ac.uk/parasitology/Proteome/Tut_2D.html">http://www.aber.ac.uk/parasitology/Proteome/Tut_2D.html</a> (last tutorial update: 07th/01/03)	<input type="checkbox"/>
	CP	The Scripps Research Institute, Website, <i>Proteomics Module</i> , 2003, pp. 1-3 at <a href="http://core-eye.scripps.edu/proteomics.htm">http://core-eye.scripps.edu/proteomics.htm</a>	<input type="checkbox"/>
	CQ	2D Protocols, Website, <i>Analysis of Proteins Using Small Format 2D Gel Electrophoresis</i> , 2000, pp. 1-5, at <a href="http://www.abdn.ac.uk/~mmb023/protocol.htm">http://www.abdn.ac.uk/~mmb023/protocol.htm</a>	<input type="checkbox"/>
	CR	Biowire.com, Website, <i>The Nucleus</i> , 2000-2002, pp. 1-4, at <a href="http://www.biowire.com/nucleus/nucleus_1_3.jsp">http://www.biowire.com/nucleus/nucleus_1_3.jsp</a>	<input type="checkbox"/>
	CS	Bio-Rad Laboratories, Website, <i>Electrophoresis</i> , 2003, at <a href="http://www.bio-rad.com/B2B/BioRad/product/br_category.jsp">http://www.bio-rad.com/B2B/BioRad/product/br_category.jsp</a>	<input type="checkbox"/>

Examiner Signature		Date Considered	
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Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT(S)</b>	<b>Complete if Known</b>	
	Application Number	Unknown
	Filing Date	Herewith
	First Named Inventor	Lean et al.
	Art Unit	Unknown
Examiner Name	Unknown	
Sheet 1 of 3	Attorney Docket No.	D/A3236 (XERZ 2 00606)

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Examiner Initials*	Cite No.	Document No. Number-Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA	US- 4,473,452	09/1984	Cantor et al.	
	AB	US- 4,647,179	03/1987	Schmidlin	
	AC	US- 4,737,251	04/1988	Carle et al.	
	AD	US- 6,272,296	08/2001	Gartstein	
	AE	US-			
	AF	US-			
	AG	US-2001/0023825	09/2001	Frumin et al.	
	AH	US-2003/0027135	2/2003	Ecker et al.	
	AI	US-2003/0034290	2/2003	Tochikubo et al.	
	AJ	US-2003/0015467	1/2003	Johnston et al.	
	AK	US-			
	AL	US-			

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	AM	WO 99/36357	07/1999	PCT		<input type="checkbox"/>
	AN	WO 00/73780	12/2000	Leisa-Mon (Israel), Ltd.		<input type="checkbox"/>
	AO					<input type="checkbox"/>
	AP					<input type="checkbox"/>

### OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T
	AQ	British Berkefeld, <i>James Filter</i> , <a href="http://www.jamesfilter.com/">http://www.jamesfilter.com/</a> , June 23, 2003	<input type="checkbox"/>
	AR	Filtros Ltd., <i>Filtros</i> , <a href="http://www.filtrosLtd.com/">http://www.filtrosLtd.com/</a> , June 23, 2003	<input type="checkbox"/>
	AS	REI, <a href="http://www.rei.com/">http://www.rei.com/</a> , June 23, 2003	<input type="checkbox"/>
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	AU		<input type="checkbox"/>
	AV		<input type="checkbox"/>

Examiner Signature		Date Considered	
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Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE  STATEMENT BY APPLICANT(S)</b>	<b>Complete if Known</b>	
	Application Number	Unknown
	Filing Date	Herewith
	First Named Inventor	Lean et al.
	Art Unit	Unknown
	Examiner Name	Unknown
Sheet 2 of 3	Attorney Docket No.	D/A3236 (XERZ 2 00606)

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Examiner Initials*	Cite No.	Document No. Number-Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	BA	US- 5,208,458	05/1993	Busch et al.	
	BB	US- 5,534,121	07/1996	Merrick et al.	
	BC	US- 5,653,859	08/1997	Parton et al.	
	BD	US- 5,837,116	11/1998	Harrington et al.	
	BE	US- 6,358,752	03/2002	Durst et al.	
	BF	US- 6,398,933	06/2002	Scott	
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	BI				
	BJ				
	BK	US-			
	BL	US-			

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Examiner Initials*	Cite No.	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Country Code-Number Kind Code (if known)				
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**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T
	BQ	SCOTT RUDGE et al., Electroseparations (Electrophoresis), <i>Encyclopedia of Chemical Technology</i> , 4th Edition, Vol. 9, pp 356-376	<input type="checkbox"/>
	BR	O'HARA et al., <i>Ratcheting Electrophoresis Microchip (REM) for Programmable Transport and Separation of Macromolecules</i> , MEMS, November 11-16, 2001, pp. 619-628, Vol. 3, ASME, USA	<input type="checkbox"/>
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	BT		<input type="checkbox"/>
	BU		<input type="checkbox"/>
	BV		<input type="checkbox"/>

Examiner Signature		Date Considered	
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